Introduction

The superior patency of the left internal thoracic artery (ITA) over saphenous-vein grafts to the left anterior descending coronary artery is well established both in the literature and in daily experience. Data from the Cleveland Clinic (Cleveland, OH) suggest that this improved patency rate also translates into improved patient survival. Increasingly, surgeons are requested to carry out repeat myocardial revascularization when the only patent conduit is the ITA graft, or when the ITA graft is widely patent but the saphenous vein grafts are severely diseased. Inspired by the theory that multiple arterial grafts may provide a survival advantage over single arterial grafts, as well as by the hope that long-term patency of such grafts will avoid the necessity of repeat operation, there has been increasing interest in the use of multiple arterial grafts. Moreover, improvements in myocardial protection have emboldened surgeons to carry out more complex procedures with the expectation of improved long-term results.

The ultimate objective based on this logic is myocardial revascularization with arterial grafts only; however, success in achieving such a goal requires a creative and flexible approach. A variety of arterial conduits in addition to the left ITA are available and have been used with success. The objective of this issue of *Operative Techniques in Cardiac & Thoracic Surgery* is to provide the reader with the operative approaches that comprise the complete armamentarium for arterial revascularization, using the internal thoracic, inferior epigastric, radial, and gastroepiploic arteries in combination. We have enticed a panel of recognized experts in the use of alternative arterial conduits to present their favorite approaches, resulting in a remarkable and practical series of articles.

This issue opens with an extensively illustrated description of options for complete arterial revascularization using the ITAs by Professor Robert Dion. The most avid proponent of the T graft, Dr. Alfred Tector, then describes his use of this technique for complete revascularization with the ITAs. A description by Dr. Rick Barner of the use of the left radial artery rather than the right ITA as the accessory limb from the left ITA in the T-graft configuration then follows. An early champion in the resurgence of the use of the radial artery, Dr. Richard Brodman, then details his approach to the use of this alternative conduit. Our focus then shifts to use of the inferior epigastric artery, an area explored by two outstanding authors, Drs. Antonio Califiore and Michel Buche. Dr. Noel Mills then discusses revascularization of the right coronary artery with either the right ITA or the gastroepiploic artery. This issue concludes with a contribution from Dr. Hisayoshi Suma that focuses on the use of the right gastroepiploic artery in the setting of a severely calcified ascending aorta.

It is our hope that this collection of manuscripts will provide the reader with a comprehensive review of the operative techniques used in this exciting and rapidly evolving area of coronary revascularization. The importance of achievement of revascularization with outstanding long-term patency is of obvious interest to patients and third-party payors alike. As operative interventions increasingly compete with catheter-based technologies, the ultimate cost effectiveness of any approach is likely to depend upon its long-term performance.

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